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Douglas W. Swartz, Esq.				
SHERIDAN ROSS P.C.				
Suite 1200				
1560 Broadway				
Denver, CO 80202-5141				
			EXAMINER	
			TURNER, ASHLEY D	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/660,938

Applicant(s)

MARWAH, MANISH

Examiner

Ashley D. Turner

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/12/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

The Examiner withdraws the objections of claims 3, 17, 18, 22, 23 so Applicant's arguments are moot.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 15, 17, 18, and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support of computer - readable medium in the specification.

Claims 17, 18, and 20, which are dependent on claim 15, are rejected for the same.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The Examiner withdraws the rejection of claims 15-18 under 35 U.S.C. 112, second, so Applicant's arguments are moot.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 15, 17, 18, and 20 are rejected under U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Independent claim 15 is drawn towards "a computer – readable medium encoded with a computer program for performing a method, the method comprising registering an endpoint with a first gateway, wherein a first signaling link is established between said endpoint and said first gateway; and in response to a loss of said first signaling link, sending a lightweight registration request (RRQ) message to a second gateway." In addition to, base on 35 U.S.C.101, the Supreme Court has specifically identified four categories of non-statutory subject matter: which are process, machine, manufacture, composition of matter. A computer –readable medium according to some specifications are carrier waves. Since applicant does not explicitly specify a computer –readable

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storage medium the meaning of a computer -readable medium is open to non-statutory subject matter.

Claims 17,18, and 20 which are dependent on claim 15, are rejected for the same.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8, 9, 10, 12-23 are rejected under 35 U.S.C. 102 (b) as being anticipated by Ton (US 6,771,623).

Referring to claim 1, Ton discloses a method for re-establishing an IP protocol call signaling channel, comprising: establishing a first call signaling channel between a first communication endpoint i.e. mobile node and a first gatekeeper i.e. home agent (Col.4 lines 5-7); wherein said first call signaling channel provides a first set of call signaling features with respect to a first bearer channel; (Col. 1 lines 45-54 Node is always identified by its home address, regardless of its current point of attachment to the Internet. Each Mobile Node is always identified by its home address, regardless of its

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current point of attachment to the Internet. While situated away from its home, a mobile node is also associated with a care-of address, which provides information about its current point of attachment to the Internet. The protocol provides for registering the care-of address with a Home Agent. The Home Agent sends datagrams destined for the Mobile Node through tunnel to the care-of address. After arriving at the end of the tunnel, each datagram is then delivered to the Mobile a Node.) in response to losing i.e. roaming said established first call signaling channel (Col.1 lines 13-17), sending a keep alive message i.e. registration request to a second gatekeeper i.e. home agent 2 (Col.5 lines lines 55-63); in response to receiving a registration confirmation message i.e. MIP registration message from said second gatekeeper in reply to said keep alive message(Col.5 lines lines 55-63), establishing a second call signaling channel with said second gatekeeper (abstract lines 13-16), wherein said second call signaling channel provides said first set of call signaling features with respect to said first bearer channel and effectively re-establishes said first call signaling channel. (Col. 10 lines 49 -60

When implementing using shared redundancy HAs existing Has on the network will be used to re0establish MIP sessions from the failed HA. The Home Agent Redundancy is based on primary/secondary concept; the default HA is the primary HA redundancy feature will use the periodic multicast or unicast messages to send Home Agent Load Information Message from the primary HA to all secondary Has indicating that it is still active).

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Referring to claim 2, Ton discloses all the limitations of claim 2 which are described above. Ton also discloses "keep alive message comprises a lightweight registration request" (Col.4 lines 26-30).

Referring to claim 3, Ton discloses all the limitations of claim 3 which are described above. Ton also discloses "step of sending keep alive message to a second gatekeeper in response to losing said established first call signaling channel comprises sending keep alive message to a plurality of alternate gatekeepers i.e. home agent 1, home agent 2, and wherein said step of establishing a call signaling channel comprises establishing a second call signaling channel with a one of said alternate gatekeepers (Col. 5 lines 26-30).

Referring to claim 4, Ton discloses all the limitations of claim 4 which is described above. Ton also discloses "in response to receiving no registration confirmation message i.e. error code from said alternate gatekeeper i.e. home agent 2 within a first time period re -registering with a gatekeeper i.e. home agent 2." (Col.6 lines 47-53)

Referring to claim 5, Ton discloses all the limitations of claim 5 which is described above. Ton also discloses establishing a bearer channel between said first communication endpoint i.e. mobile node and a second communication endpoint i.e. foreign agent (Col.2 lines 3-5), wherein said call signaling channel carries data related

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at one of control of features associated with data transferred between said first and second communication endpoints by said bearer channel i.e. IP-in IP tunnel (Fig.2)

Referring to claim 6, Ton discloses all the limitations of claim 6 which is described above. Ton also discloses, "wherein said first communication endpoint comprises a telephony device." (Col. 1 lines 28-30).

Referring to claim 8, Ton discloses a communication system, comprising: a first communication endpoint i.e. mobile node, operable to at least one of receive data from and provide data to an Internet protocol network (Col.4 line 4-8); a first gatekeeper i.e. home agent, operable to control aspects of operation of a communication endpoint in communication with said first gatekeeper (Col.3lines 10-15), wherein said first communication link provides a first call signaling channel in support of a first real-time communication (Col. 1 lines 45-54 Node is always identified by its home address, regardless of its current point of attachment to the Internet. Each Mobile Node is always identified by its home address, regardless of its current point of attachment to the Internet. While situated away from its home, a mobile node is also associated with a care-of address, which provides information about its current point of attachment to the Internet. The protocol provides for registering the care-of address with a Home Agent. The Home Agent sends datagrams destined for the Mobile Node through tunnel to the care-of address. After arriving at the end of the tunnel, each datagram is then delivered to the Mobile a Node.); a first communication link between said first communication

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endpoint and said first gatekeeper (Col.6, Fig.2 lines 50-58); a second gatekeeper, operable to control aspects of operation of a communication endpoint in communication with said gatekeeper (Col. 4 lines 33-37); and a second communication link between said first communication endpoint and said second communication gatekeeper(Col 9. lines 34-42), wherein said second communication link is established after said first communication link is lost and after an exchange of a lightweight RRQ message and RCF message between said first communication endpoint and said second communication gatekeeper (Col. 9 lines 50-53) wherein said second communication link provides a second call signaling channel; that replaces said first call signaling channel, wherein said real-time communication formerly supported by said first call signaling channel is supported by second call signaling channel after said first communication link is lost (Col. 1 lines 13-15 Typical IP networks are mainly developed for stationary terminals connected to the network by wired connections. Mobile terminals may be connected by use of base transceiver stations, but to achieve true mobility functions are required for handling e.g. roaming and handover in the network). (Col. 2 lines 58-65 When away from home, Mobile IP uses protocol tunneling to hide a Mobile Node's home address from intervening routers between its home network and its current location. The tunnel terminates at the Mobile Node's care-of address. The care-of address must be an address to which datagrams can be delivered via conventional IP routing. At the care-of address, the original datagram is removed from the tunnel and delivered to the Mobile Node).

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Referring to claim 15, Ton discloses the limitations of a computer-readable medium encoded with a computer program for performing a method, the method comprising: Registering an endpoint i.e. mobile node with a first gateway i.e. home agent (Col. 5 lines 64-65), wherein a first signaling link that supports a first bearer channel comprising a real-time communication is established between said endpoint and said first gateway (Fig 2. 550 MIP registration request); in response to a loss of said signaling link, sending a lightweight registration request (RRQ) message to a second gateway i.e. foreign agent (Col. 6 lines 41-45) in response to receiving a registration confirmation message from second gateway, establishing a second signaling link between said endpoint and said second gateway, wherein said second signaling link supports said first bearer channel comprising a real-time communication. (Col. 9 lines 65- Col.10 lines 1-10 The FA will forward 570 the Mobile IP RRP with error code 136 (Unknown HA address) to the MN. On reception of the Mobile IP RRP with the HA change indication extensions, the MN will use the specified IP will use the specified IP address in the HA change indication extension in its next Mobile IP RRQ 575. This RRQ is forwarded 580 by the FA to HA2. HA2 processes the RRQ (authenticates and validates the MN) and will accept or reject it. If HA2 accepts it will add a new mobility binding, establish, establish a tunnel 595 between the FA and HA2, and send 585 an RRP to the FA which will forwarded it 590 to the MN.)

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Referring to claim 17, Ton discloses all the limitations of claim 17 which is described above. Ton also discloses in response to receiving a registration rejection message (Col.6 lines 47-53), sending a lightweight RRQ message to a third gateway. (Col. 6 lines 41-45)

Referring to claim 18, Ton discloses all the limitations of claim 18 which is described above. Ton also discloses sending a lightweight RRQ message to a third gateway (Col. 6 lines 41-45).

Claim 19 is likewise rejected using the same reasoning and citations for claim 15 since they recite identical limitations and are distinguished only by statutory category.

Referring to claim 20, Ton discloses all the limitations of claim 20 which is described above. Ton also discloses wherein said computational component comprises a logic circuit (Col.2 lines 6-9).

Referring to claim 21, Ton discloses a communication system endpoint, comprising: means for communicating and said first means for controlling aspects of an exchange of data in real-time between said communication system endpoint and a second communication system endpoint (Col.3lines 10-15); means for generating a lightweight RRQ message in response to a loss of a communication link between said means for communicating and said means for controlling; aspects of an exchange of data between

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said communication system endpoint and a second communication system endpoint

(Col. 9 lines 50-53 "HA1 will send 555 the HA mobility binding update message to the redundancy HA, HA2, to indicate that the MN has registered. HA2 will then acknowledge 560 this update to HA1); and means for interconnecting said at least a first communication endpoint means and said means for controlling aspects of an exchange of data between said communication system endpoint, wherein a first call signaling channel in support of a first real-time communication is established. (Col. 10 lines 51-59 When implementing using shared redundancy HAs existing HAs on the network will be used to re-establish MIP sessions from the failed HA. The Home Agent Redundancy is based on primary/ secondary concept; the default HA is the primary HA and all the other on the network are secondary HAs. The HA redundancy feature will use the periodic muticast or unicast messages to send Home Agent Load Information Message from the primary HA to all secondary HAs indicating that it is still active.)

Referring to claim 22, Ton discloses the limitations of claim 22 which is described above. Ton also discloses means for storing a list of alternate means for controlling aspects of an exchange of data between said communication system endpoint and a second communication system endpoint, wherein said means for generating a lightweight RRQ message addresses said lightweight RRQ message to second of said alternate means for controlling wherein a second call signaling channel is established. (Col. 5 lines 43-54 First the MN receives an agent advertisement 215 from the Foreign Agent ("FA"). It sends the Mobile IP Registration Request ("RRQ") 220 with the statically

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configured HA address. The FA forwards the Mobile IPRRQ 225 to the configured HA, Home Agent #1. HA1 will look in its local HA load information table to find a HA where the load is less than its own. If it finds one that is less busy then it will return 230 a Mobile IP Registration Reply ("RRP") with error code 130 (Insufficient resources) including a new mobile IP extension will have a HA IP Address Update with the address of the second Home Agent (HA2).

Claim 23 is likewise rejected using the same reasoning and citations for claim 22 since they recite identical limitations.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Ton (US 6,771,623) in view of Craig (US 6,930,999 B1).

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Referring to claim 7, Ton discloses all the limitations of claim 7 which is described above. Ton did not disclose, "wherein said call signaling channel is established according to an ITU-T H. 323 protocol". The general concept of "wherein said call signaling channel is established according to an ITU-T H. 323 protocol" is well known in the art taught by Craig. Craig discloses, "wherein said call signaling channel is established according to an ITU-T H. 323 protocol"(Abstract lines 1-5). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ton to include "wherein said call signaling channel is established according to an ITU-T H. 323 protocol" in order to have a reliable channel to convey the call setup and teardown messages.

Referring to claim 9, Ton and Craig discloses all the limitations of claim 9, which is described above. Ton also discloses a second communication endpoint i.e. home agent; and a third communication link, wherein said third communication link is established between said first and second communication endpoints (Col.5 lines 57-63).

Referring to claim 10, Ton and Craig discloses all the limitations of claim 10 which is described above. Ton also discloses, "wherein said first communication endpoint comprises a telephony device." (Col. 1 lines 28-30).

Referring to claim 12, Ton and Craig discloses al the limitations of claim 12, which is described above. Ton also discloses wherein said first communication endpoint i.e. mobile node comprises a gateway i.e. foreign agent (Col. 1 line 67 and Col.2 line 1-3).

Referring to claim 13, Ton and Craig discloses al the limitations of claim 13, which is described above. Ton also discloses wherein said first communication endpoint comprises a first gateway and at least a first telephony device interconnected to said gateway (Col.1 line 67 and Col.2 line 1-3).

Referring to claim 14, Ton and Craig discloses al the limitations of claim 14, which is described above. Ton also discloses wherein said first communication endpoint i.e. mobile node comprises memory operable to store an address of said second communication gatekeeper i.e. home agent 2. (Col. 6 lines 25-32).

Claim 11 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Ton (US 6,771,623) in view of Tsutsumi (US 6,904,277 B2).

Referring to claim 11, Ton discloses all the limitations of claim 11, which is described above. Ton does not disclose, "wherein said telephony device comprises at least one of an IP telephone, a soft telephone, a videophone, and a soft videophone." The general concept of having wherein said telephony device comprises at least one of an IP

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telephone, a soft telephone, a videophone, and a soft videophone is taught by Tsutsumi. Tsutsumi discloses said telephony device comprises at least one of an IP telephone, a soft telephone, a videophone, and a soft videophone (Col. 1 lines 60-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ton to include said telephony device comprises at least one of an IP telephone, a soft telephone, a videophone, and a soft videophone in order for communication to be carried out.

Response to Arguments

10. Applicant's arguments filed on 10/4/2007 have been fully considered but they are not persuasive.

Summary and Response to Arguments

A. Applicant argues the rejection under 35 U.S.C. 102 (b) under Ton as Ton is not directed to re-establishing a call signaling channel.

As to point A applicant's, upon closer examination the feature of directed to re-establishing a call signaling channel is still disclose by Ton which is stated in (Col. 1 lines 64-67. A Home Agent is router on a Mobile Node's home network which tunnels datagrams for delivery to the Mobile Node when it is away from home, and maintains current location information for the Mobile Node). Therefore examiner has interpreted call signaling channel a communication of data between the nodes.

B. Applicant argues the rejection under 35 U.S.C. 102(b) under Ton as Ton does not teach, suggest or describe a keep alive message that comprises a lightweight registration request.

As to point B applicant's, upon closer examination the feature of a keep alive message that comprises a lightweight registration request is still disclosed by Ton. The claim does not specify the type of protocol as a result the examiner interprets in the prior art cited the RRQ as the lightweight registration request.

C. Applicant argues the rejection under 35 U.S.C. 102(b) under Ton as Ton does not reference a situation where a first call signaling channel is lost.

As to point C applicant's, upon closer examination the feature of where a first call signaling channel is lost is still disclosed by Ton which is stated in Col. 8 lines 55-65. The MN then sends 455 a Re-registration Request to HA1 which is forwarded 360 to HA1 by the FA. In the situation indicated by the dotted line the primary HA fails i.e. (lost signal communication). If the primary HA, here HA1, fails, the FA will return 465 a Mobile IP RRP with one of the following error codes. As a result when the HA is failed that's when the connection is lost.

Conclusion

11. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashley d. Turner whose telephone number is 571-270-1603. The examiner can normally be reached on Monday thru Friday 7:30a.m. - 5:00p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached at 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-270-2603. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent Examiner:

Ashley Turner

Ashley Turner

Date: 12/4/07

Supervisory Patent Examiner

NATHAN FLYNN
SUPERVISORY PATENT EXAMINER

Date: _____